September 2002 KCIA Column for PNWA&BJ
Written by Sharyn Parker, KCIA Noise Officer

King County International Airport Addresses Noise Issues

King County International Airport (KCIA) began its comprehensive Federal Aviation Regulation Part 150 Study of Noise and Land Use Compatibility in 1999. The study faced competing public policy goals: 1) manage aircraft noise in surrounding communities and 2) maintain the economic viability of the airport and businesses.

Balancing these twin goals was the role of KCIA's appointed Study Advisory Committee (SAC). The Committee represented surrounding airport communities, airport tenant businesses, local government officials, labor and the FAA. The SAC, working with the consultant team and airport staff, held over twenty meetings to research, debate and refine its recommendations. It effectively balanced the special interests of neighborhood activists and airport tenants, including The Boeing Company. The SAC managed to complete its daunting task of crafting study recommendations in March 2002.

An extensive public outreach program was conducted by KCIA during the development of Study Advisory Committee recommendations. The program included 26 community meetings, open houses, and a web page. Four newsletters were published and widely distributed throughout the region in order to communicate complex study findings, including technical aviation flight procedures and noise metrics.

After intense community review, King County Executive Ron Sims transmitted his report to the County's legislative leadership for further deliberation on July 23, 2002. The King County Council will hold hearings in the fall of 2002 and will forward the study to the FAA after adoption. The FAA requires a 180-day review and approval period. The County Executive's Airport Proposal can be found on the KCIA website at www.metrokc.gov/airport.

Operational and Procedural Changes

Several recommendations contained in the Executive's Airport Proposal focus on operational adjustments to flight procedures to manage aircraft noise. For example, one recommendation implements a public instrument approach from the north that makes procedures with an Elliott Bay ground track to avoid over-flights of noise-sensitive residential areas. To accomplish this goal, technology--such as the offset localizer directional aid (LDA)--would be used and/or KCIA would continue as a site for testing different technology by FAA flight inspection personnel.

Another flight procedure included in the County Executive's proposal would utilize a FAA-approved, close-in departure for northbound flights. This recommendation reduces the size of the 65 decibel (dB) and greater day-night-level* (DNL) noise exposure in the

Georgetown community, which is directly north of the airport. (*DNL is the average day/night decibel noise level with a 10-point penalty added for nighttime hours.

While the Study Advisory Committee considered a recommendation that would close Boeing Field to nighttime flights, it was determined as too drastic because of its economic consequences. In its place, the SAC recommended, and the County Executive agreed, to ban Stage 2 jets at night. However, adoption of this operational change would not affect maintaining an existing voluntary curfew (10 p.m.-7 a.m.) of ground-generated aircraft engine run-ups, which is also recommended in the Executive's Airport Proposal.

Fly Quiet Program

Both the SAC and County Executive Sims recommended programmatic improvements. These "administrative" recommendations are organized as the Fly Quiet Program. The Program features three initiatives: Operator Education, Pilot Incentives, and purchasing advanced technology equipment to improve noise monitoring and flight tracking capabilities.

The centerpiece of the Fly Quiet Program is an Operator Education Program that provides extensive outreach to KCIA's tenants and general aviation pilots. This critical program element involves communicating technical aspects of flight tracking and noise monitoring conducted by KCIA's Noise Office to supplement instructional aspects of preferred flight procedures. Administrative improvements also include upgrading KCIA's flight tracking and noise monitoring to achieve voluntary pilot compliance and accountability.

A Pilot Resource Working Group, comprised of pilots from cargo tenants, representatives from Fixed Base Operators, and flight schools, as well as general aviation operators, will assist KCIA staff create flyer-friendly technical materials for pilot's use, inclusion into Airway Manuals, and available to download from KCIA's website.

In addition, this working group will help to create a system of incentives and rewards as part of a Pilot Incentives Program. Research already indicates a range of possibilities to reinforce pilot's voluntary compliance with preferred flight procedures and performance measurements that occur at airports nationwide.

The Fly Quiet Program also includes significant technology upgrades that will enable KCIA's Noise Office to better identify and track aircraft. For example, it is currently difficult to track small "1200" code aircraft without transponders that otherwise elude detection by FAA's radar system. By adding advanced digital recording equipment, noise abatement specialists will be able to hear the "N" numbers that identify aircraft when a pilot reports its "N" number to the airport tower upon arrival or departure.

Finally, outreach to surrounding airport communities is an important feature of the Fly Quiet Program. In 1999, KCIA purchased a sophisticated airport database management information system in order to track all aircraft flights within King County and noise

monitors with microphones that measure sound produced by those flights. While this information is readily available to airport staff, with new software-equipped portable computer equipment, this information will be available for presentation to community audiences and on KCIA's website. Flight patterns and noise measurements for specific communities will be demonstrated in a manner previously unavailable to the airport. This feature alone should improve communication and confidence in KCIA's ability to manage and report aircraft noise affecting neighborhoods close to the airport.

Facility Improvements

Two recommendations were identified by County Executive Sims that support facility improvements. The first requires site selection and a feasibility study for a Ground Run-up Enclosure (GRE). Significant noise reduction can occur if aircraft run-ups occurred in a GRE facility. Executive Sims substituted this facility for a SAC-recommended noise wall because it would be more effective in mitigating noise impacts to nearby neighbors.

The second facility-related recommendation was to establish airport building design/placement standards to reduce off-airport noise effects from aircraft movements on the ground. This recommendation encourages acoustical design and placement of future landside airport facilities in order to reduce ground-generated noise intrusion to adjacent residences.

Financial Assistance

Despite operational and administrative recommendations to manage aircraft noise on the field, homeowners living closest to the airport still experience frequent and high decibel noise levels. The County Executive's Airport Proposal provides a variety of options for homeowners living within KCIA's 65-70 dB DNL noise exposure areas, including purchase of avigation (noise) easements, sound insulation of single family residences, and sales transaction assistance.

Finally, one common option offered by airport operators is a FAA-sponsored program to insulate schools and public buildings. KCIA is coordinating with Seattle Public Schools to accomplish sound attenuation improvements at eligible schools when remodeling projects are planned.